FOTO20" 9EFS2460

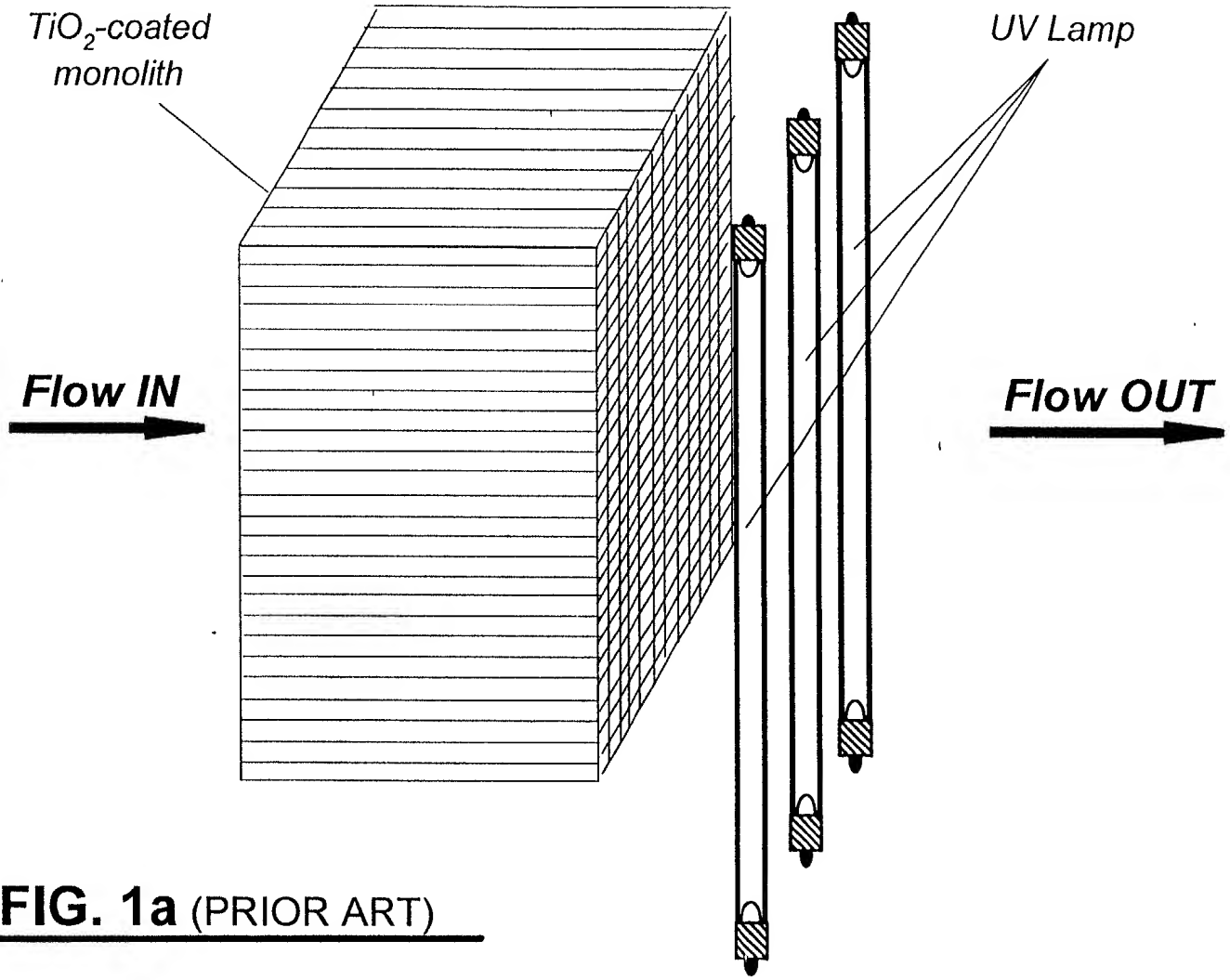


FIG. 1a (PRIOR ART)

TOTO20 "9EP52460

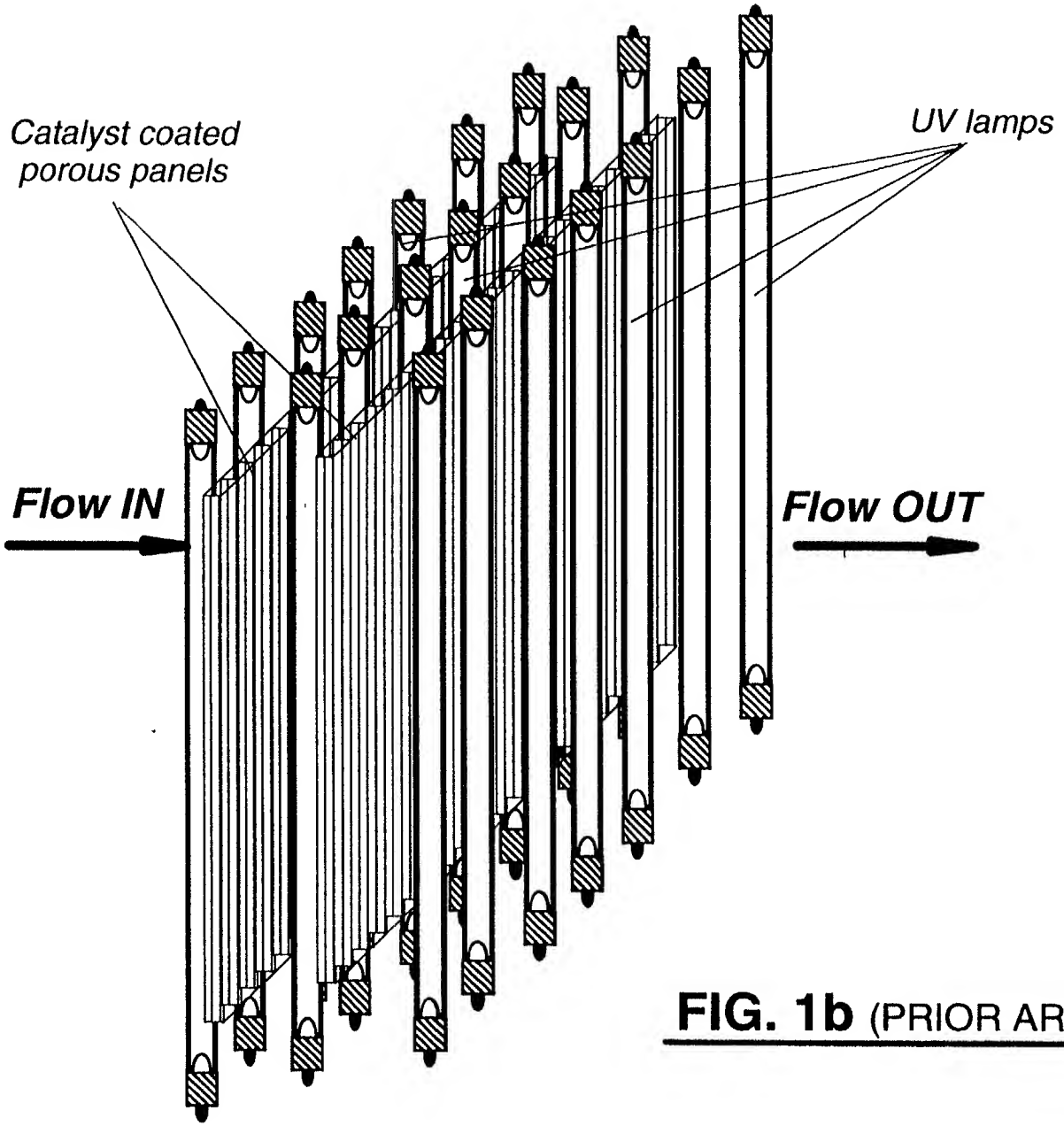
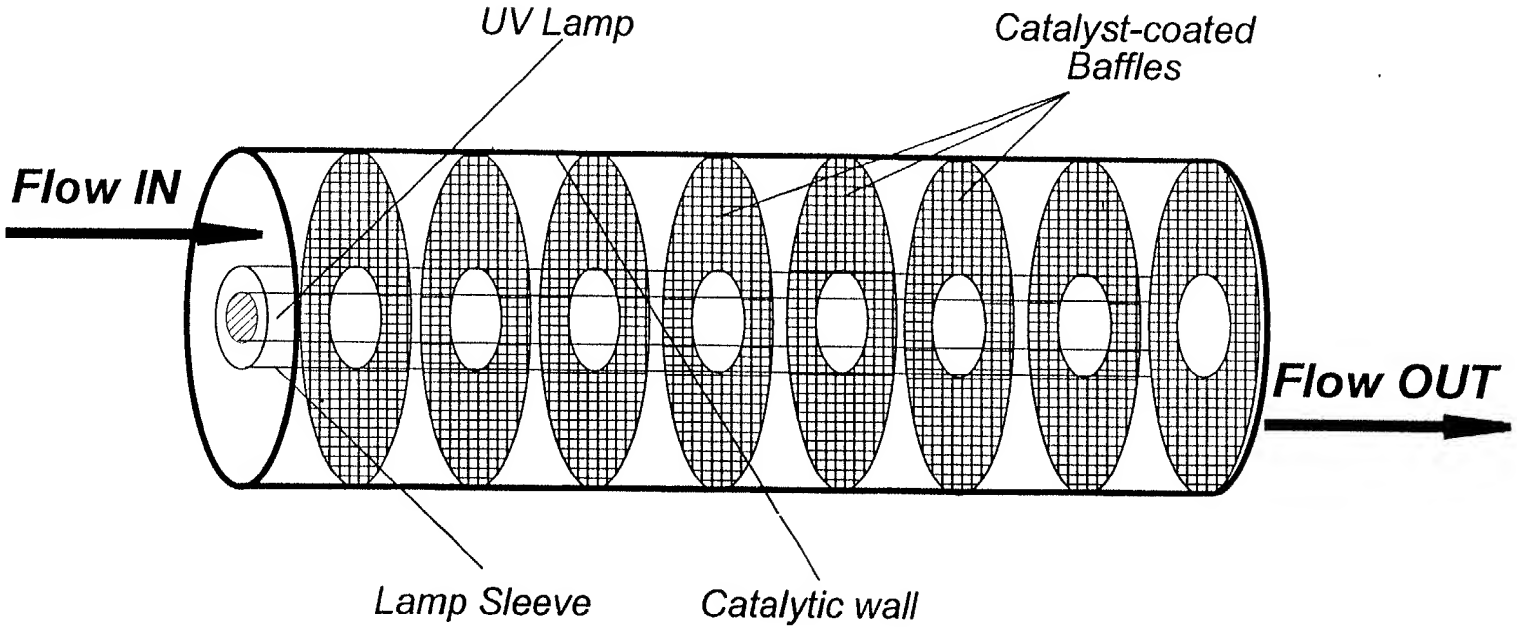


FIG. 1b (PRIOR ART)

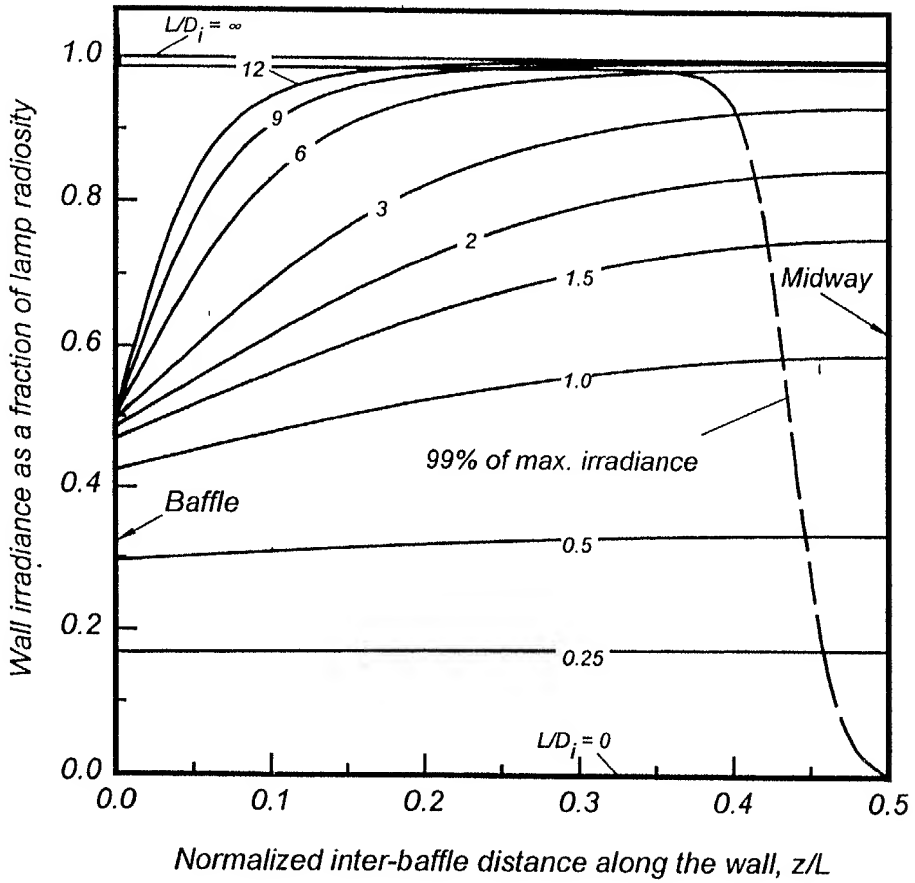
TOTO20 "9ET52260

FIG. 1c (PRIOR ART)



TOTOZO" 9ETSZZ60

FIG. 2



TOTO20"9ETS260

FIG. 3

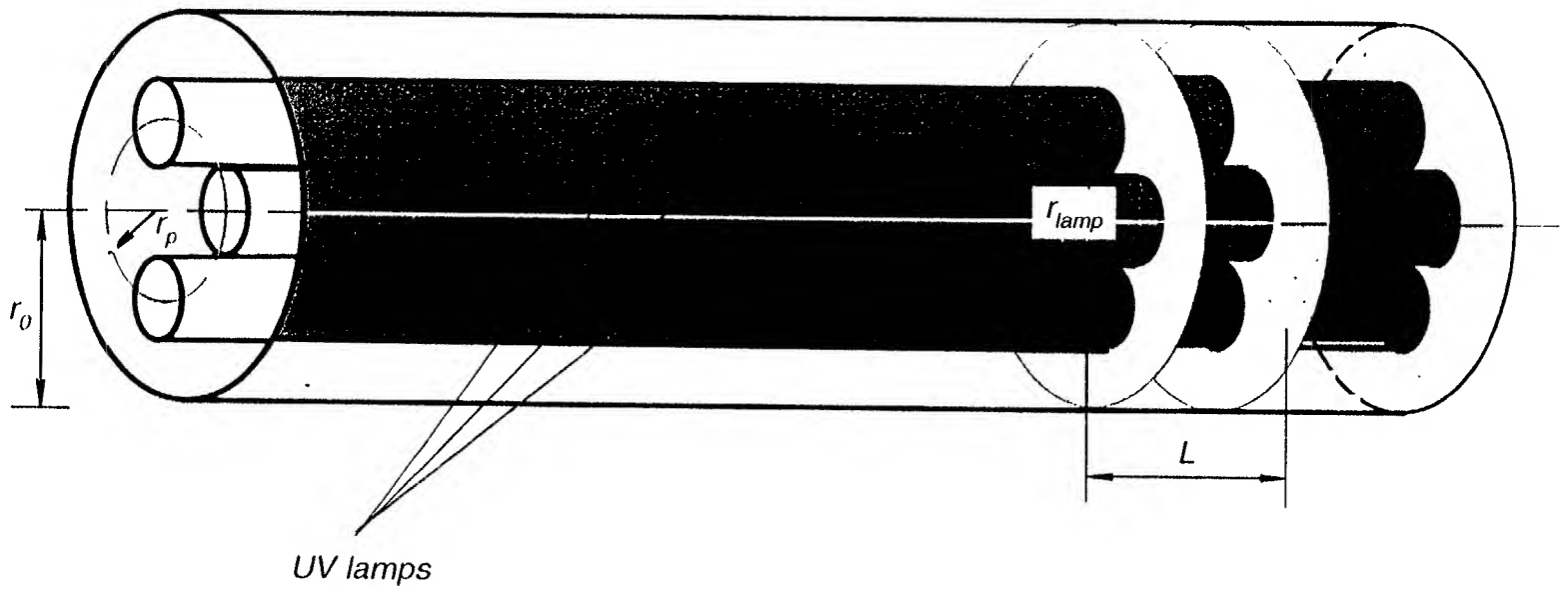


FIG. 4b

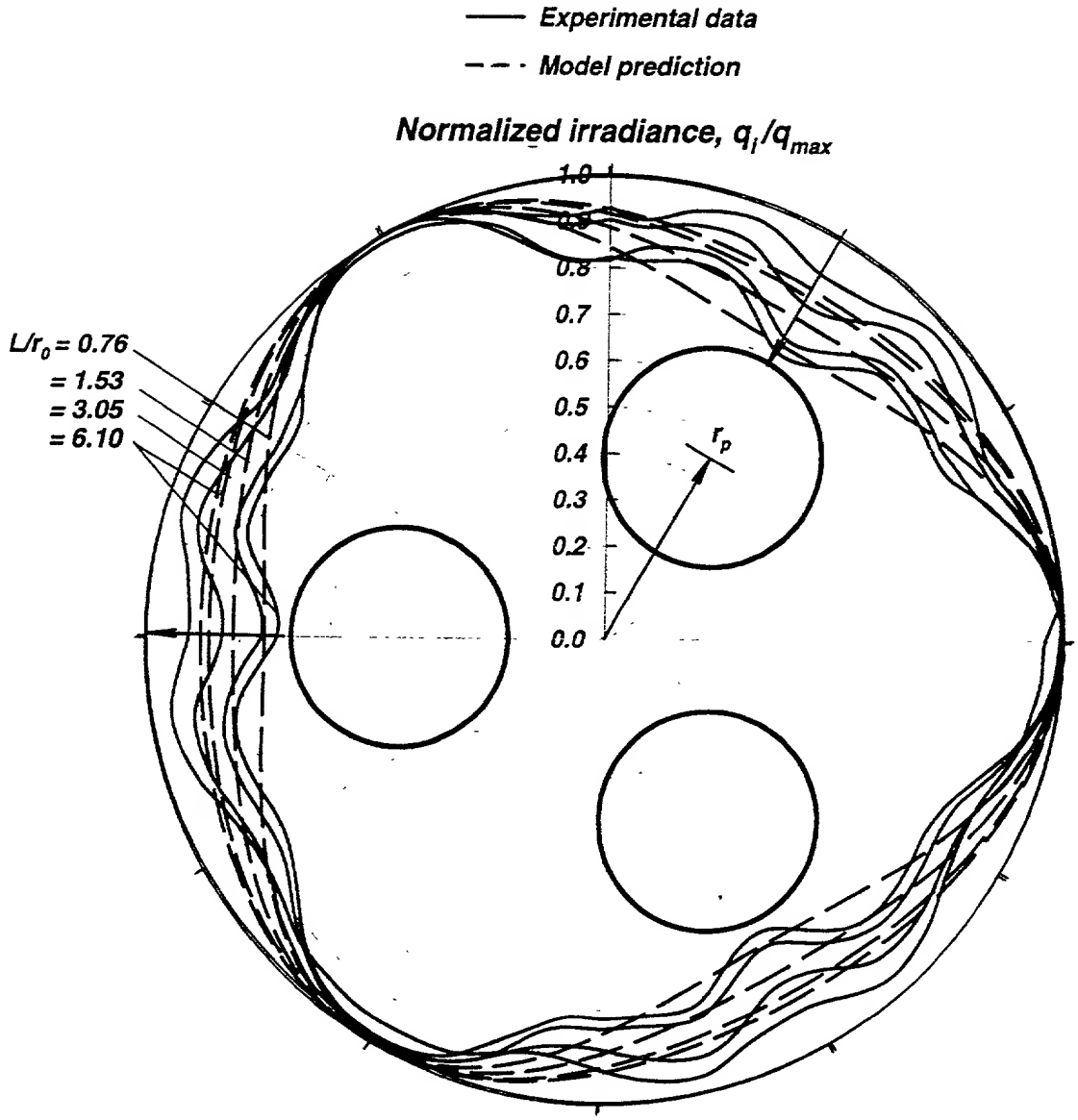
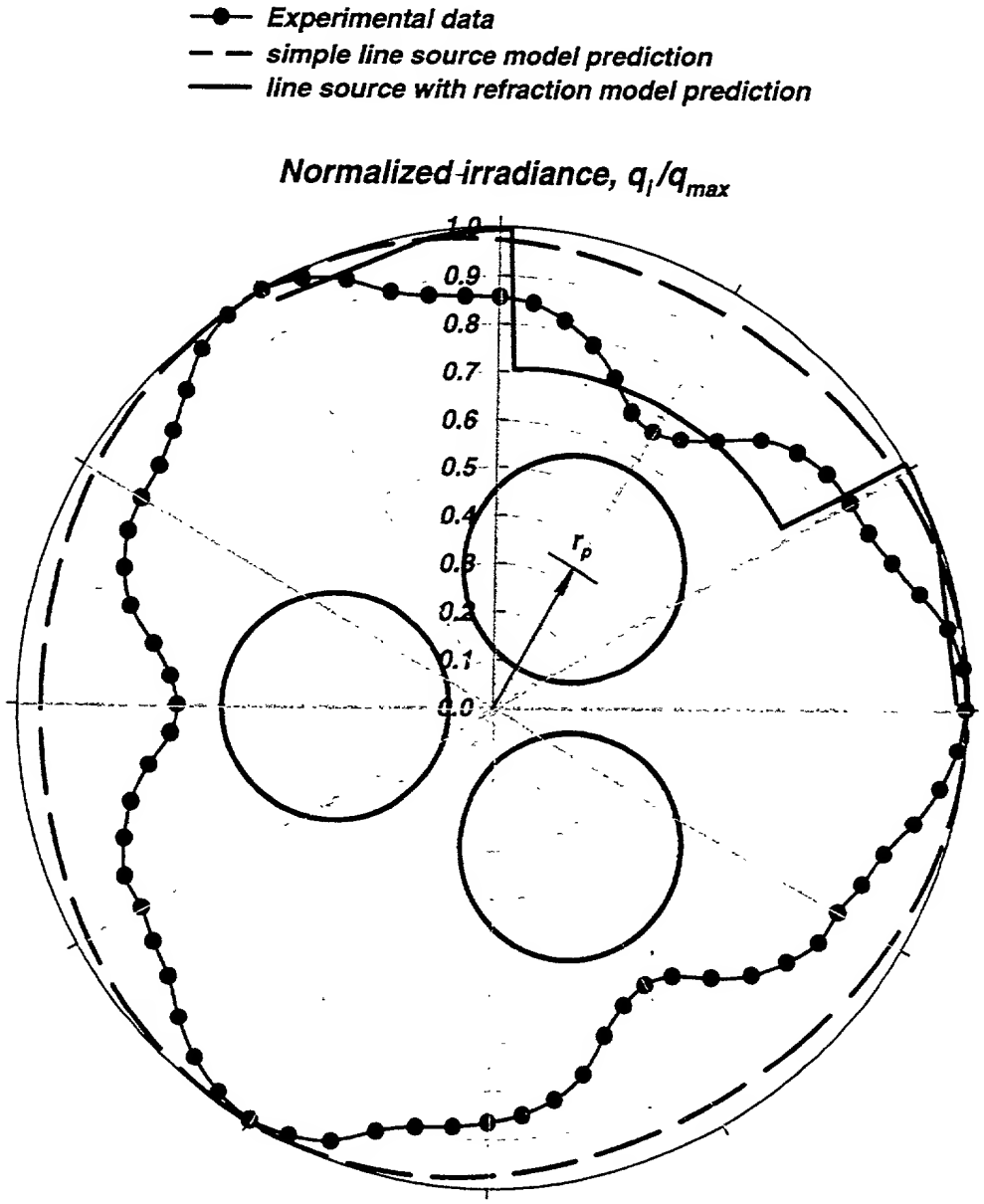

Experimental data
Model prediction
Normalized irradiance, q_i/q_{max}
1.0
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
r_p
L/r_0 = 0.76
= 1.53
= 3.05
= 6.10

FIG. 5


Experimental data
simple line source model prediction
line source with refraction model prediction
Normalized irradiance, q_l/q_{max}
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
r_p

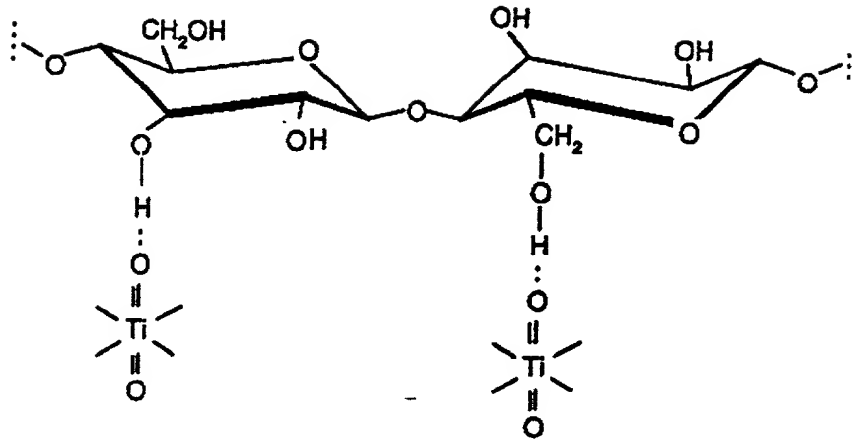


FIG. 6

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FIG. 8a

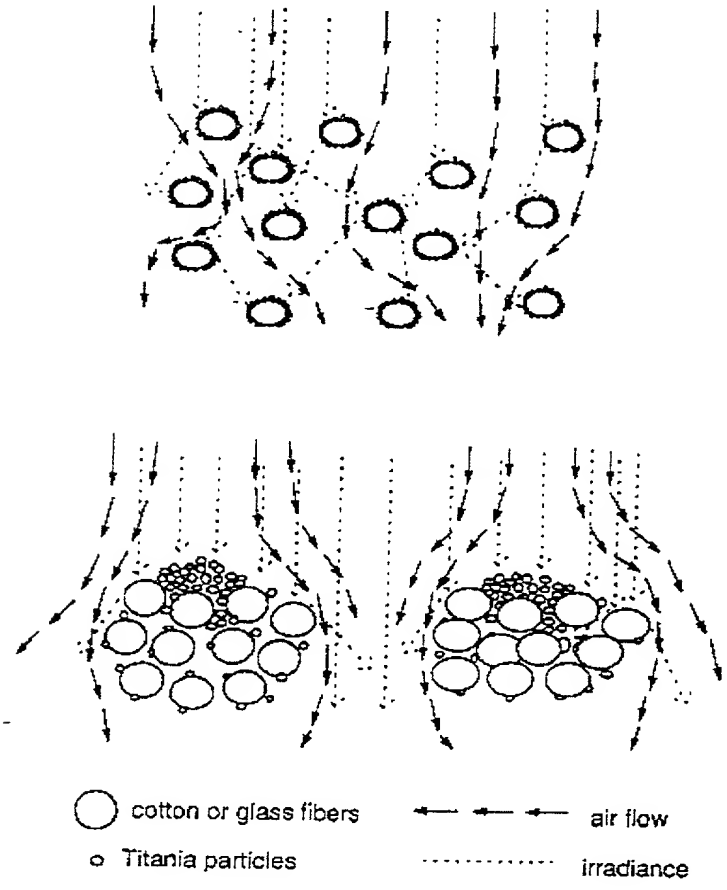

FIG. 8b
(PRIOR ART)

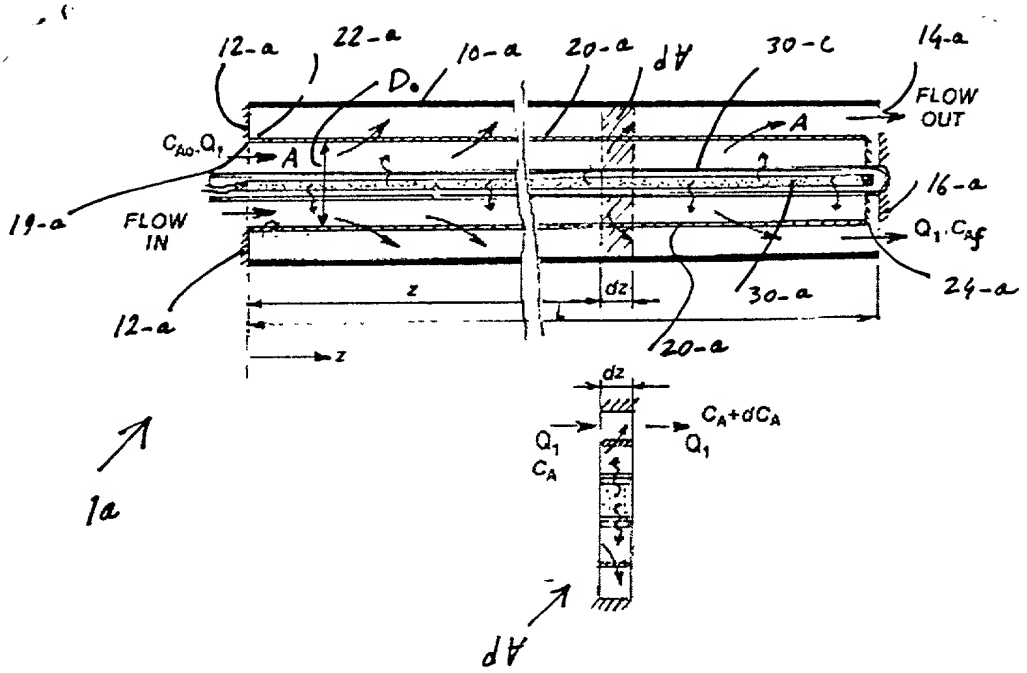

FIG. 9a

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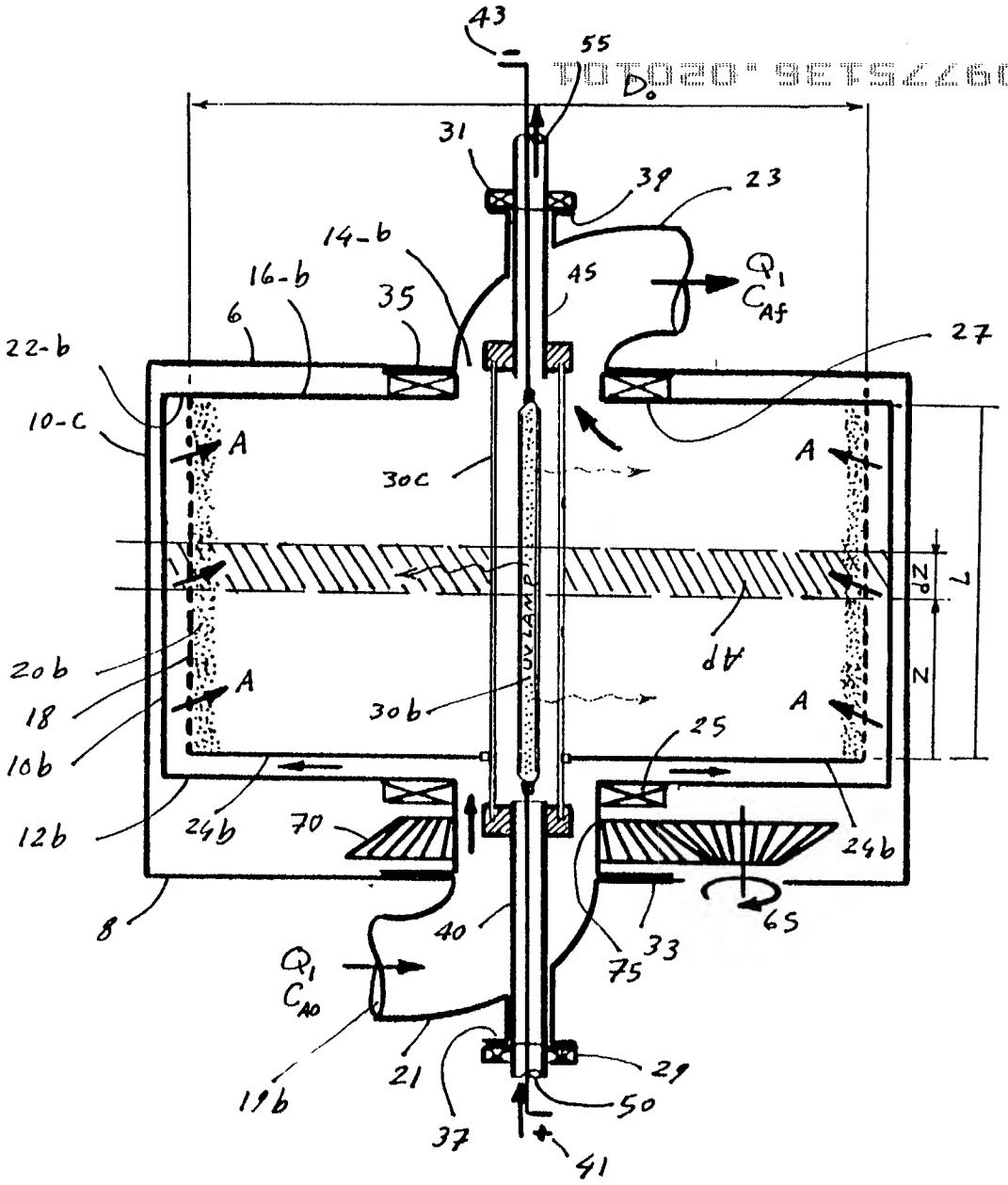
43
55
D_o
31
39
23
14-b
16-b
35
45
Q_1
C_{Af}
6
22-b
10-C
27
A
30c
UV LAMP
ΔP
Zp
Z
L
20b
18
10b
12b
24b
70
30b
25
8
40
33
75
65
Q_1
C_{A0}
19b
21
29
50
37
41

1b

FIG. 9b

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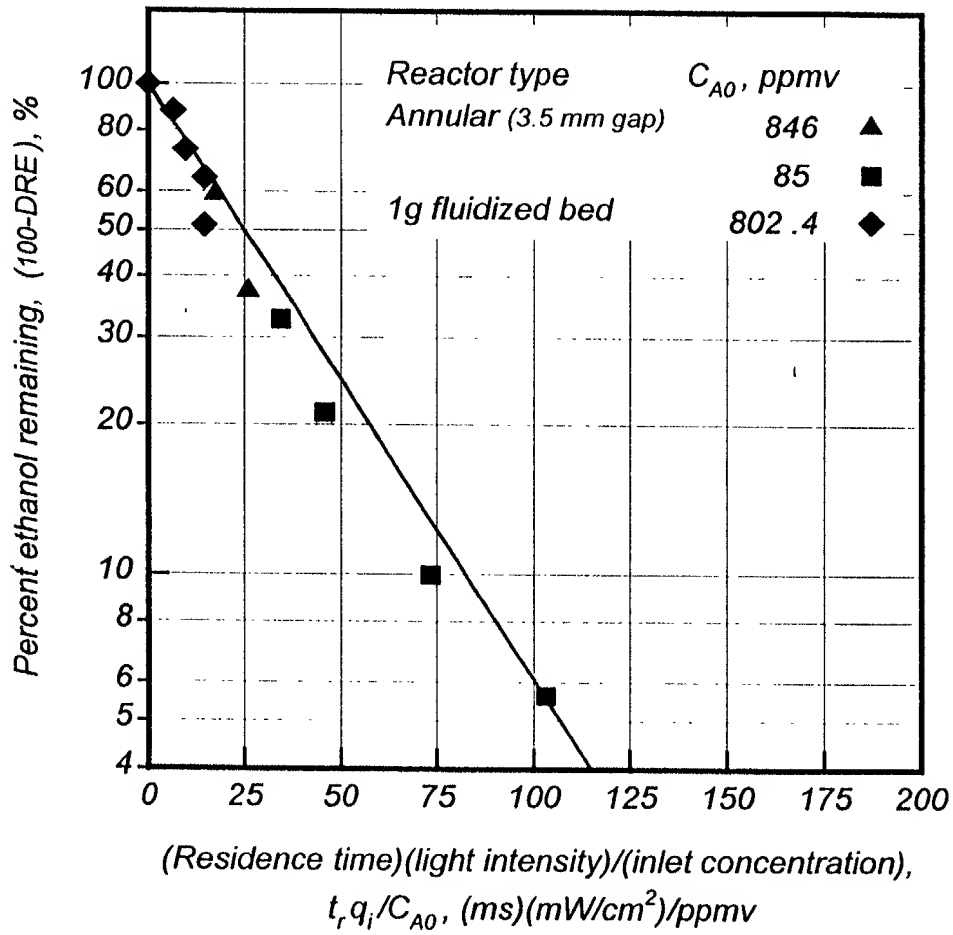
FIG. 10



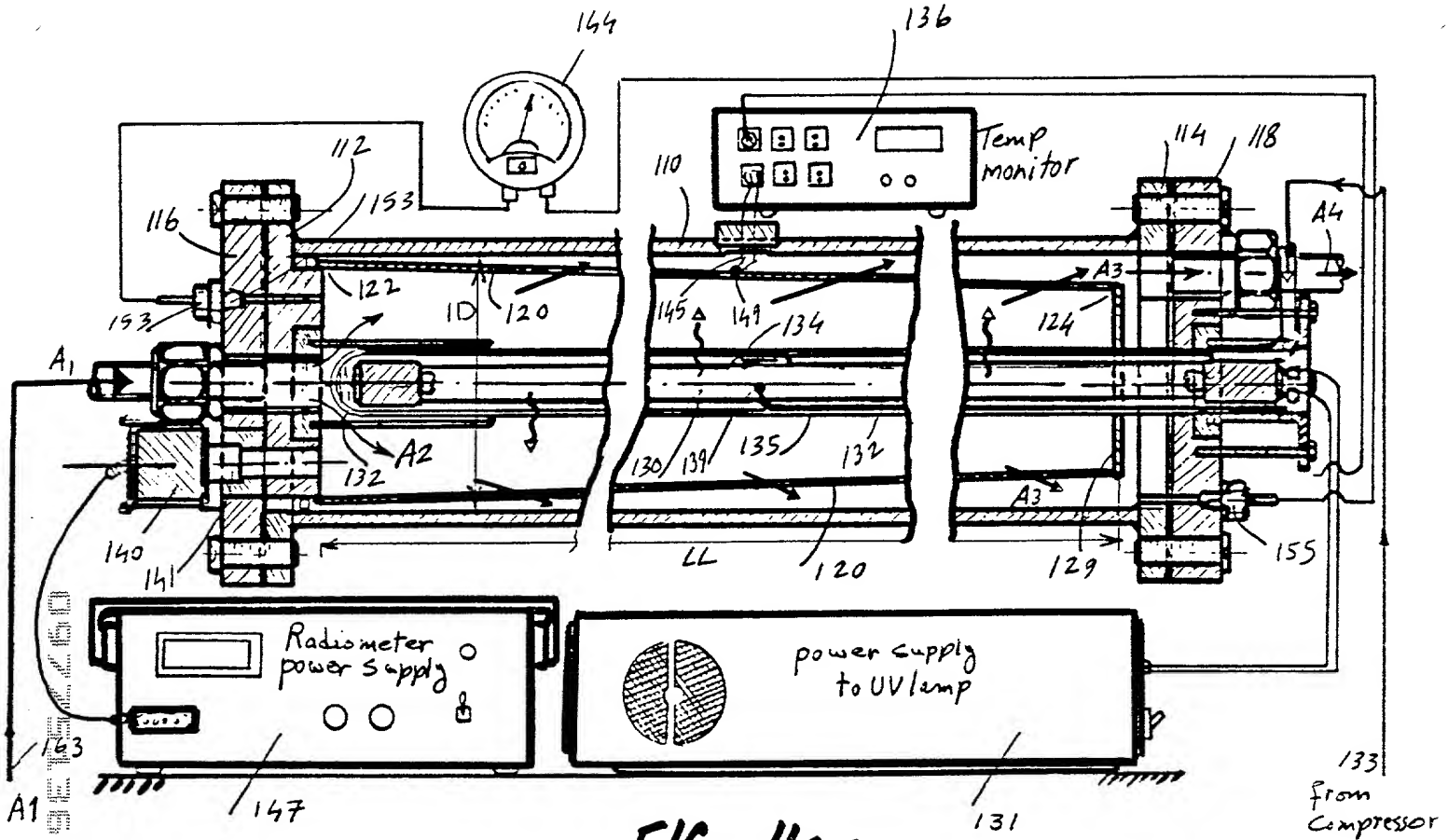


FIG. 11a

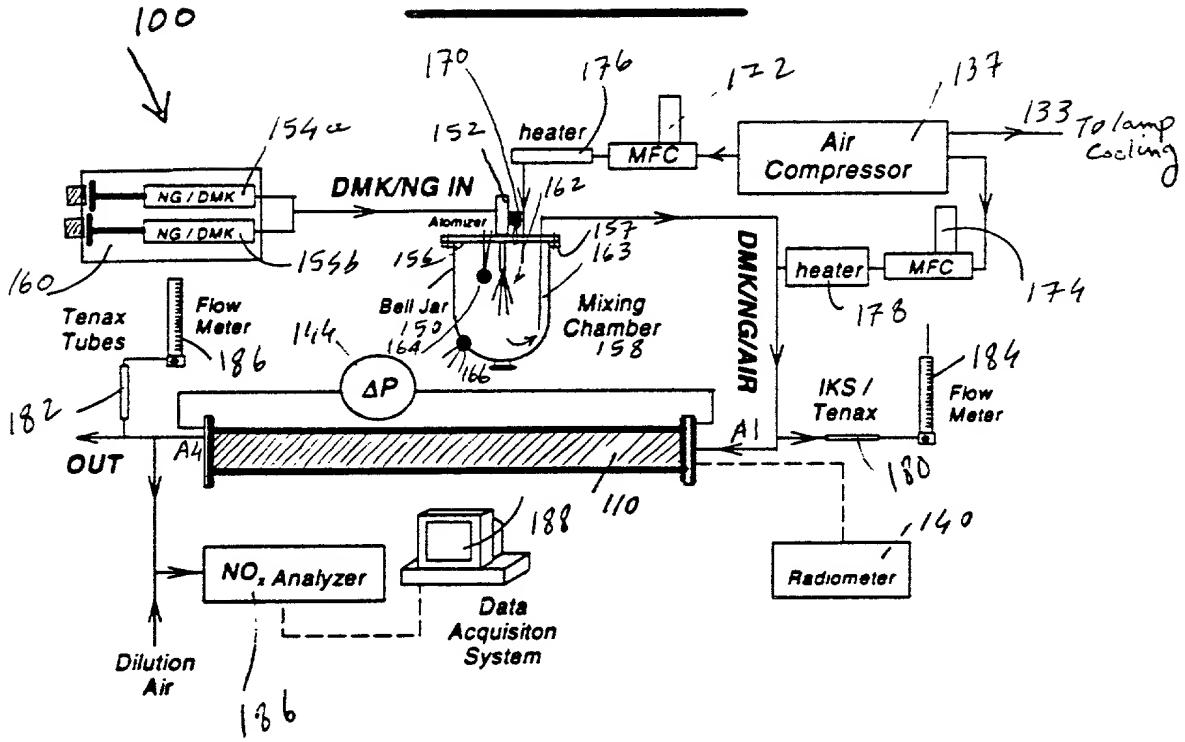


FIG. 11b

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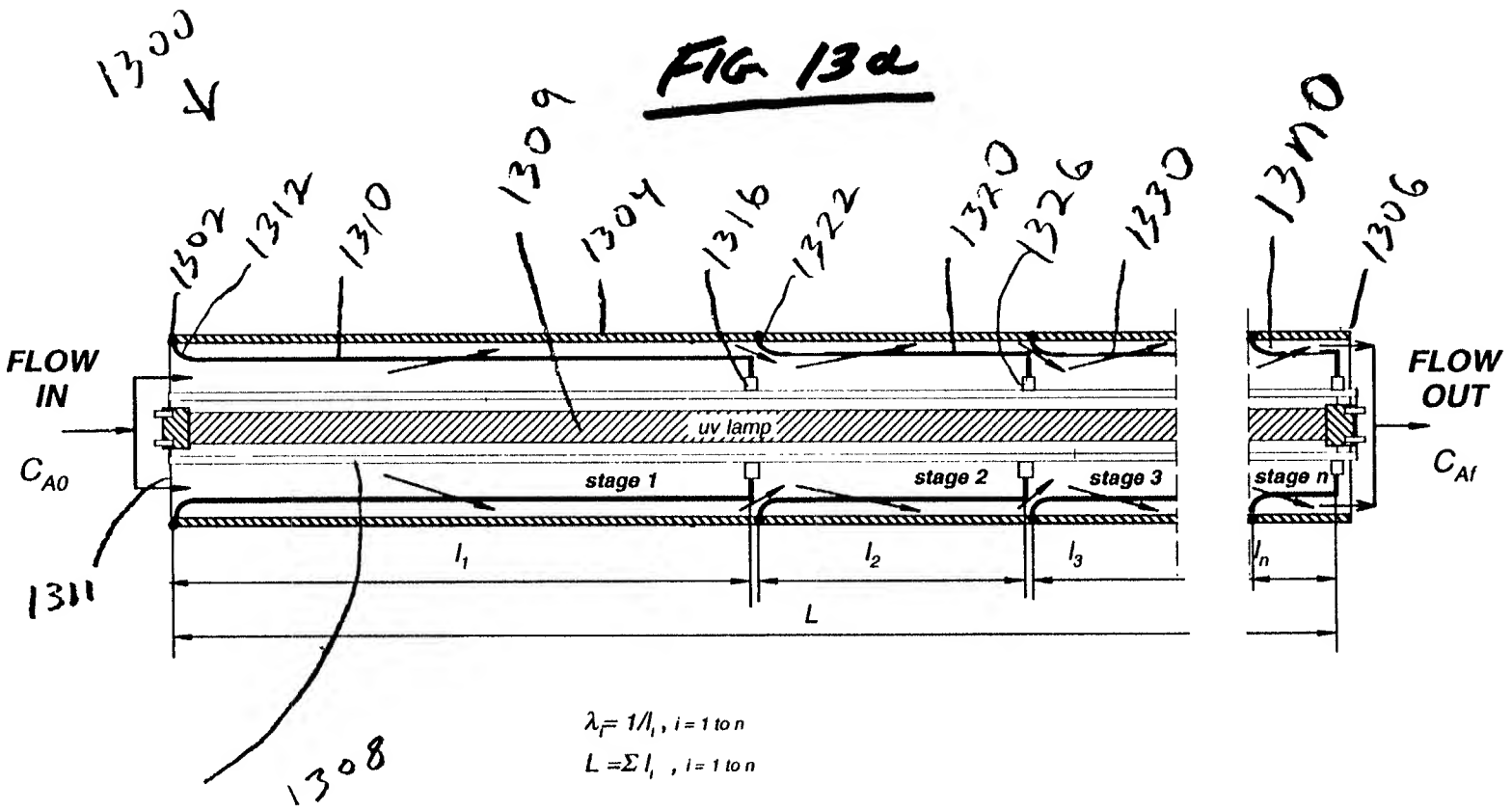
FIG 13a



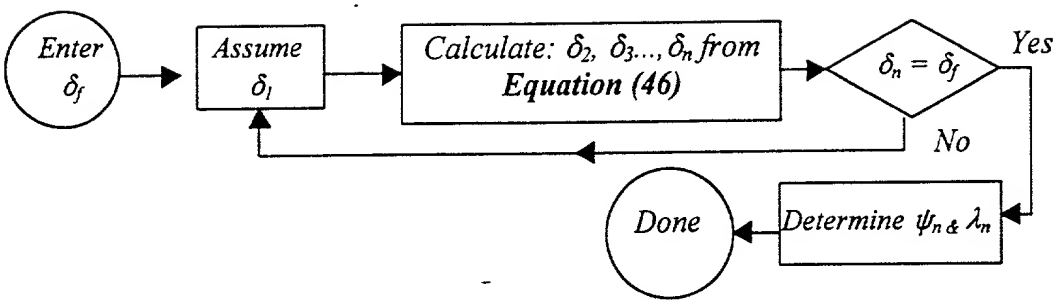

Enter δ_f
Assume δ_1
Calculate: δ_2, δ_3..., δ_n from Equation (46)
$\delta_n = \delta_f$
Yes
No
Determine ψ_n & λ_n
Done

FIG. 13b

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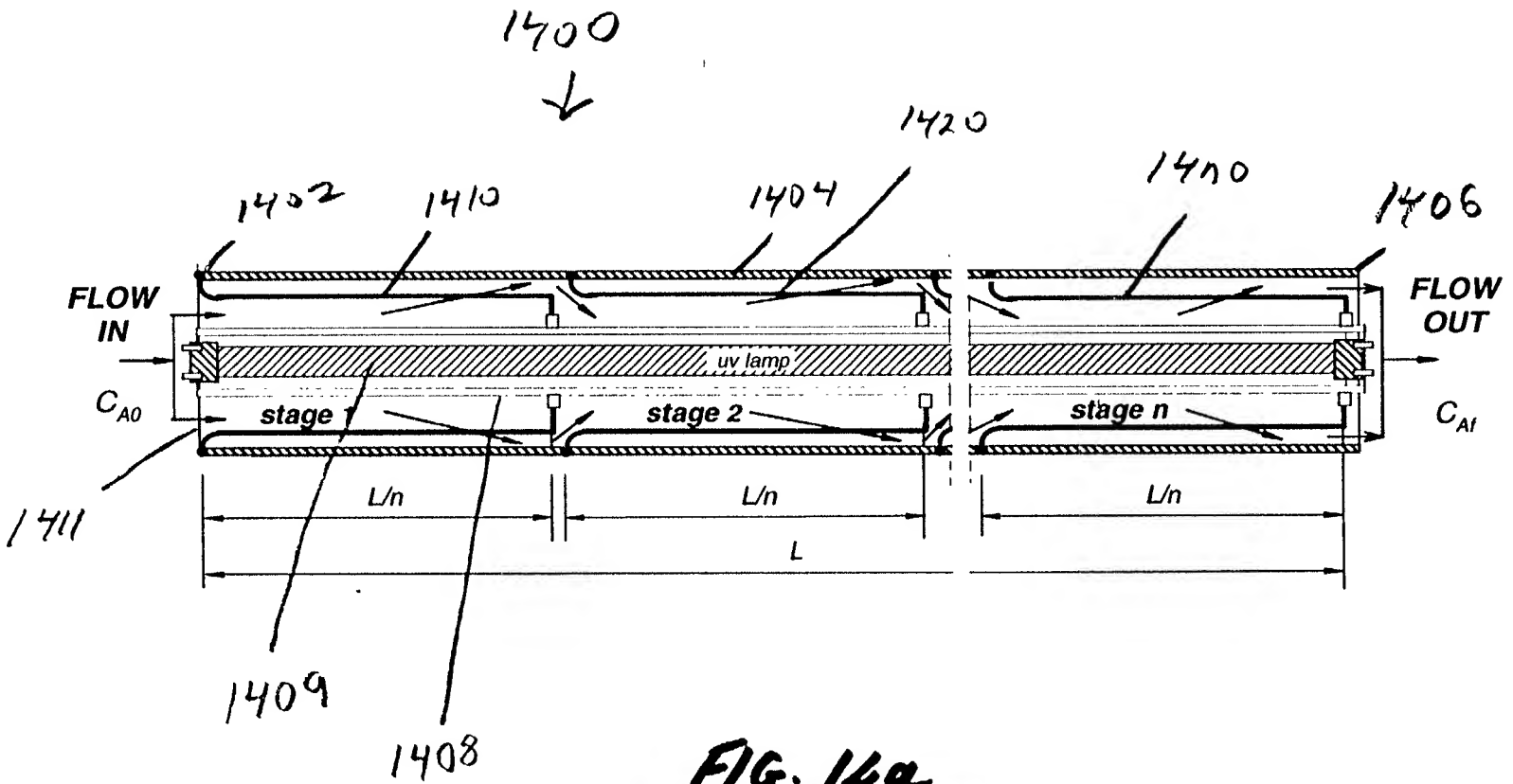


FIG. 14a

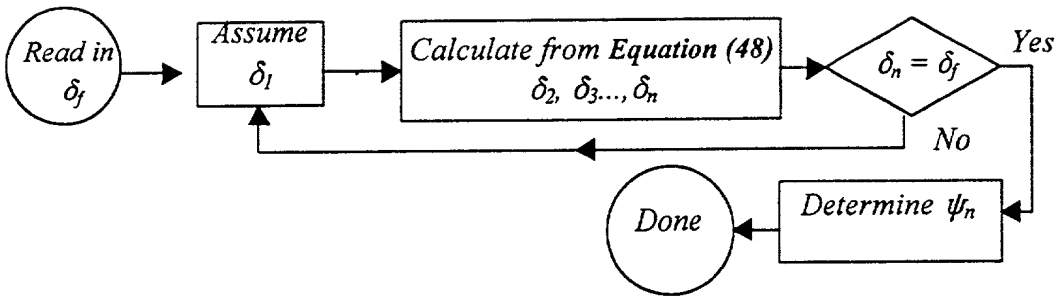

Read in δ_f
Assume δ_1
Calculate from Equation (48) $\delta_2, \delta_3 \ldots, \delta_n$
$\delta_n = \delta_f$
Yes
No
Determine ψ_n
Done

FIG. 14b

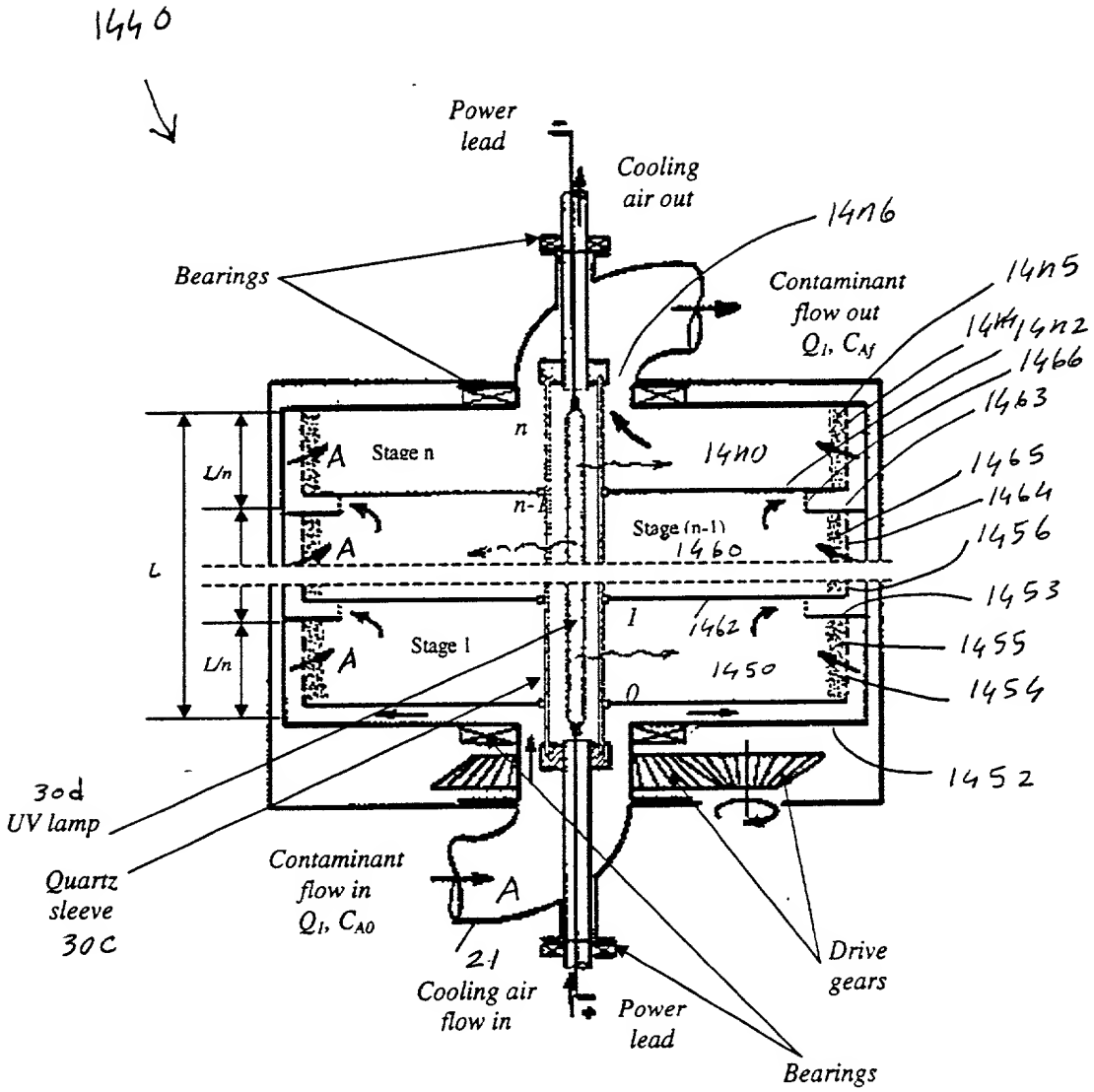
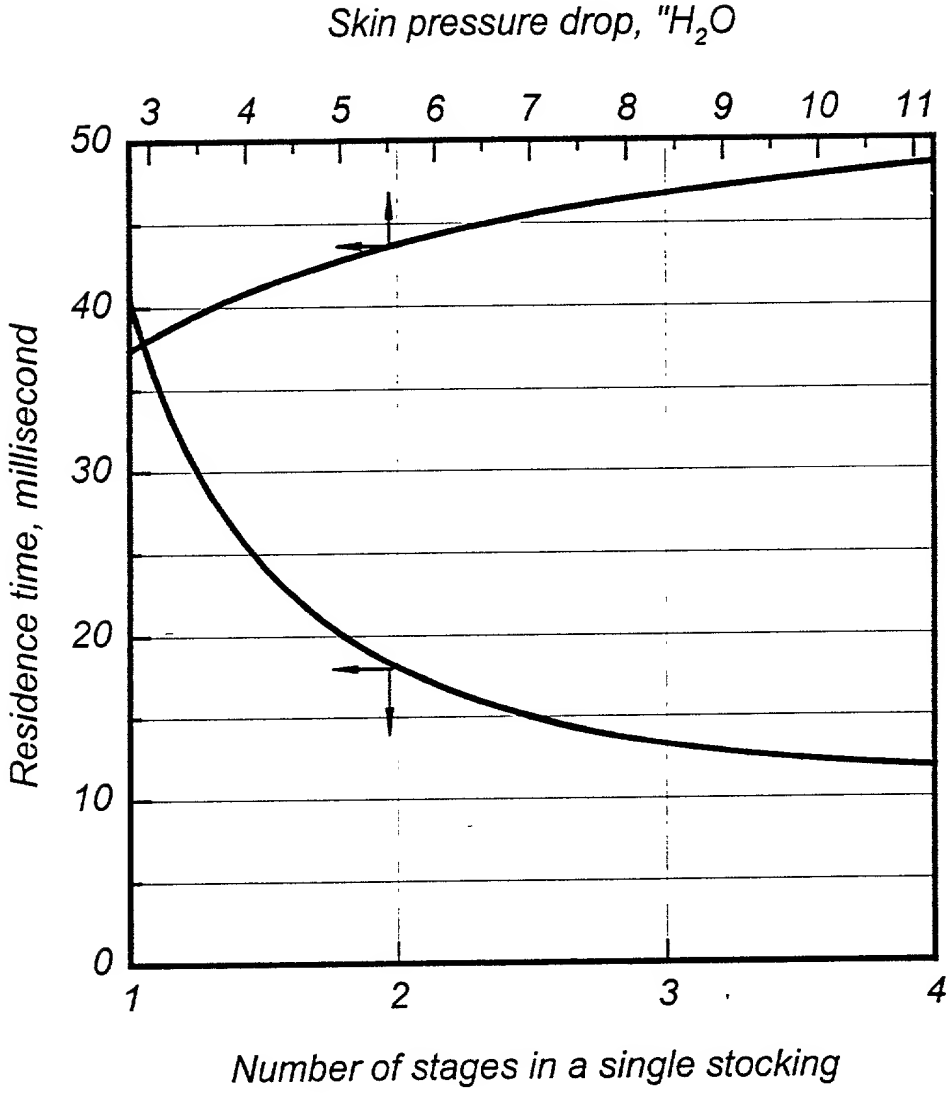

1440
Power lead
Cooling air out
1446
Bearings
Contaminant flow out Q_1, C_{Af}
1445
1444
1442
1466
1463
1465
1464
1456
1453
1455
1454
1452
Stage n
Stage (n-1)
Stage 1
1460
1462
1450
1440
n
n-1
1
0
A
L
Ln
30d
UV lamp
Quartz sleeve
30c
Contaminant flow in Q_1, C_{A0}
21
Cooling air flow in
Power lead
Drive gears
Bearings

FIG. 14C

FIG. 15


Skin pressure drop, "H_2O
3
4
5
6
7
8
9
10
11
50
40
30
20
10
0
Residence time, millisecond
1
2
3
4
Number of stages in a single stocking

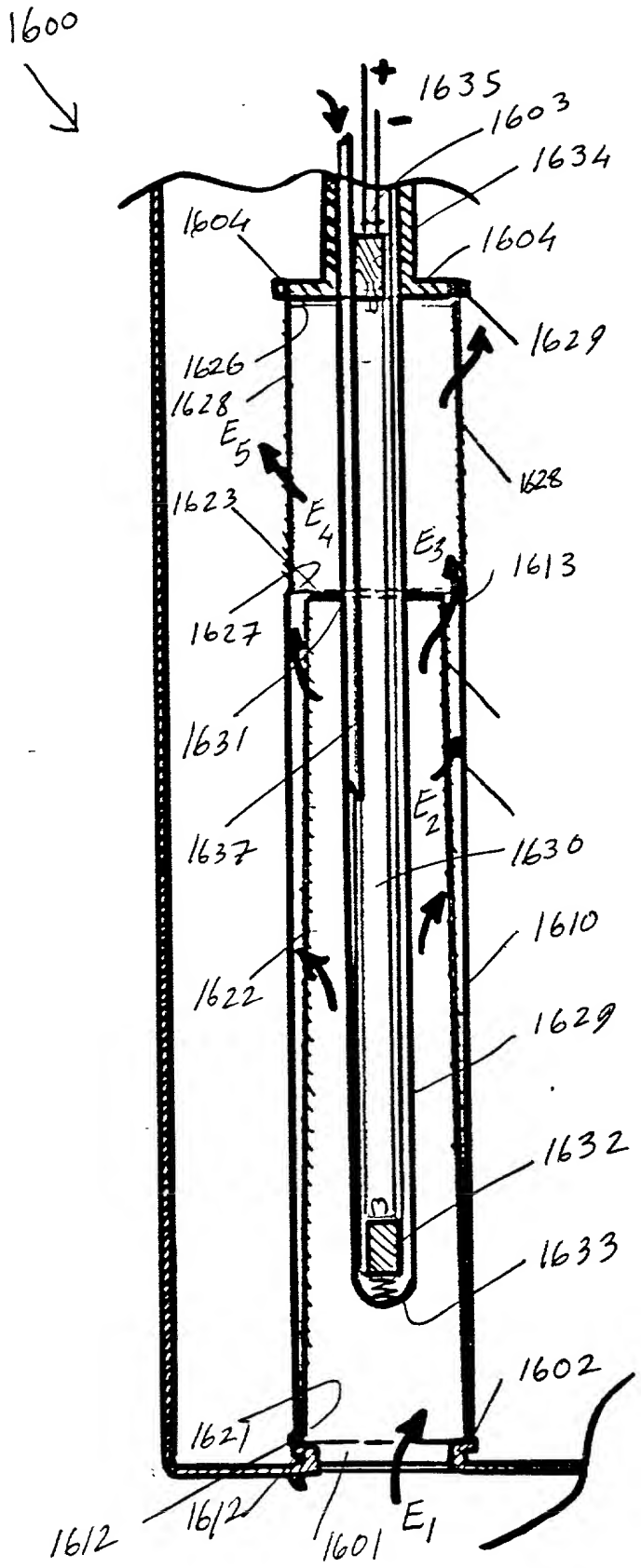

1600
1635
+
-
1603
1634
1604
1604
1629
1626
1628
E_5
1628
1623
E_4
E_3
1613
1627
1631
1637
E_2
1630
1610
1622
1629
1632
1633
1602
1621
1612
1612
1601
E_1

FIG. 16

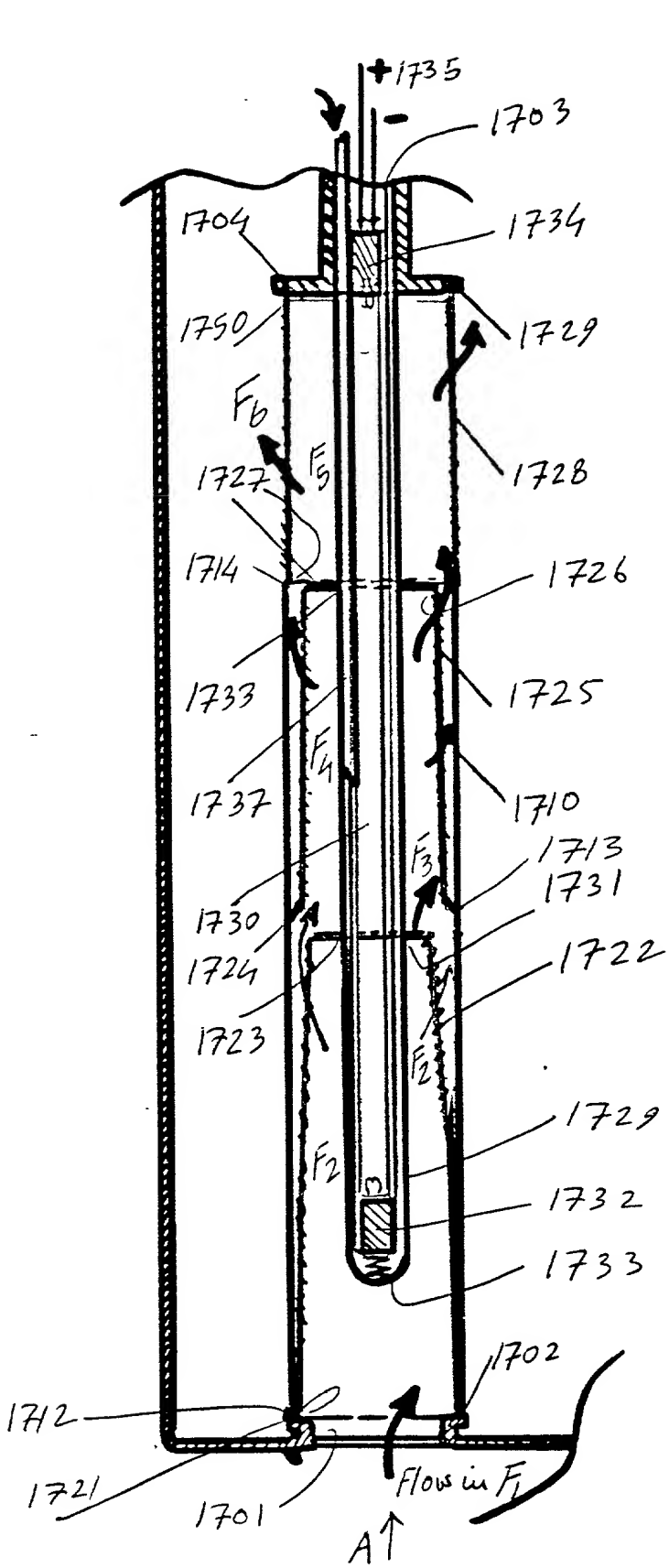

1700
+1735
-
1703
1704
1734
1750
1729
F_6
F_5
1727
1728
1714
1726
1733
1725
F_4
1737
1710
1713
F_3
1731
1730
1724
1722
1723
F_2
1729
F_2
1732
1733
1702
1712
1721
1701
Flow in F_1
A

FIG. 17

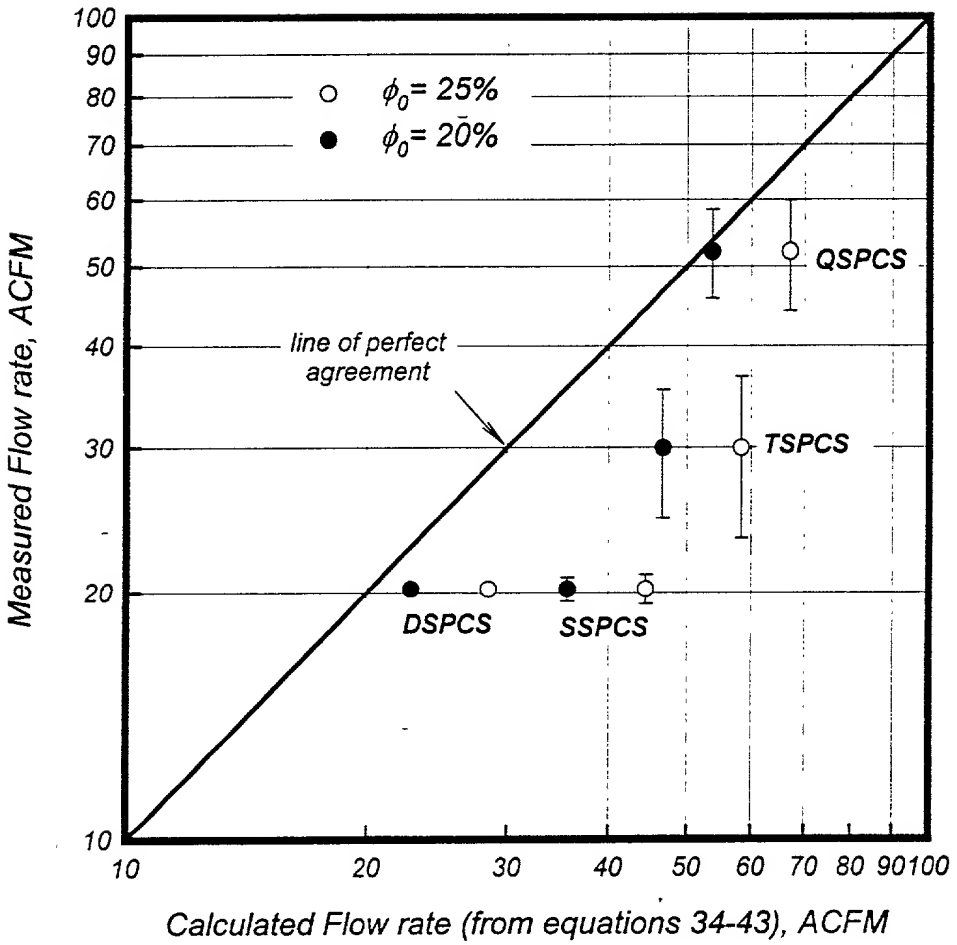

100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
70
80
90
100
ϕ_0= 25%
ϕ_0= 20%
QSPCS
TSPCS
line of perfect agreement
DSPCS
SSPCS
Measured Flow rate, ACFM
Calculated Flow rate (from equations 34-43), ACFM

FIG. 18

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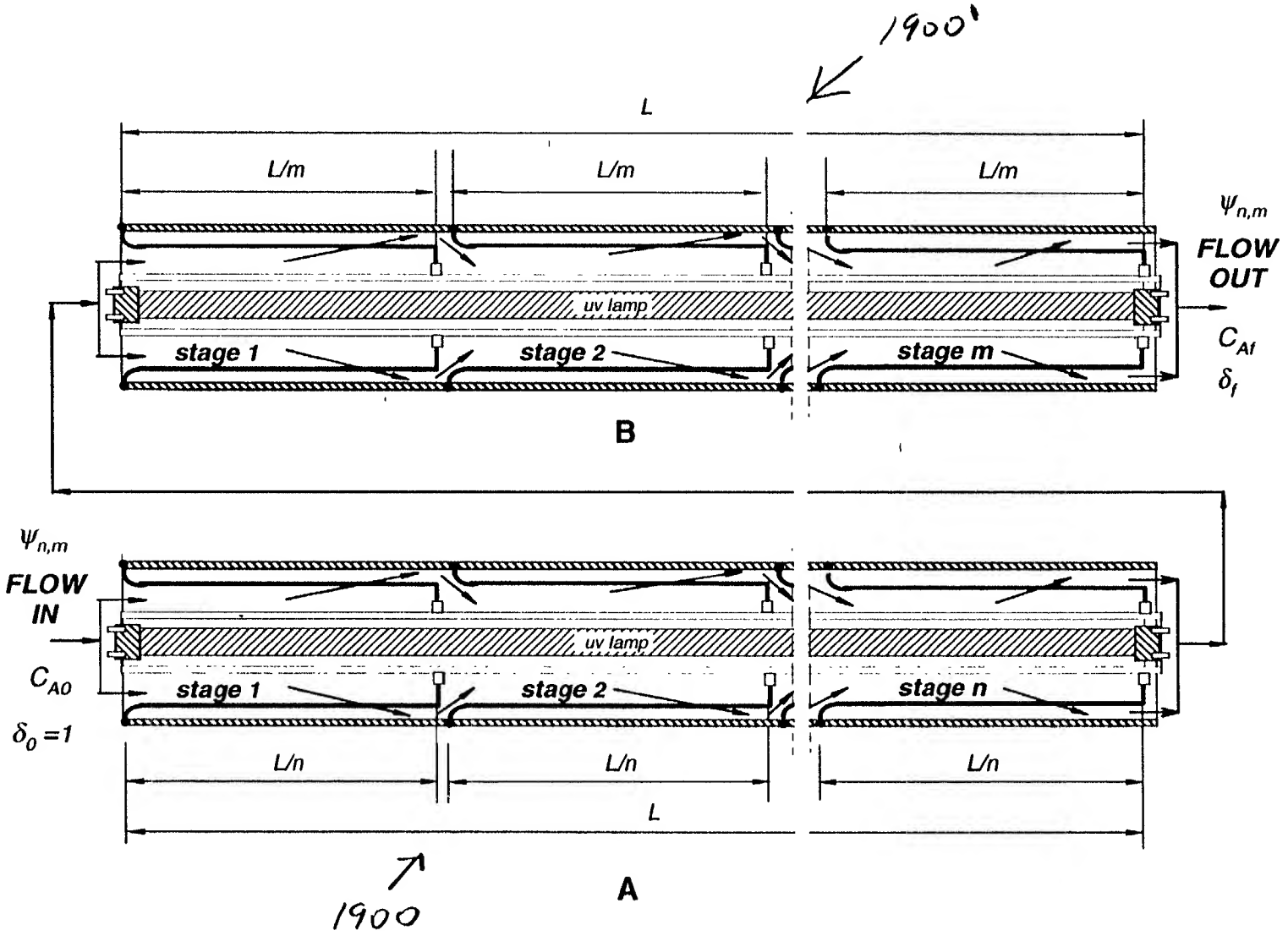

FIG. 19a

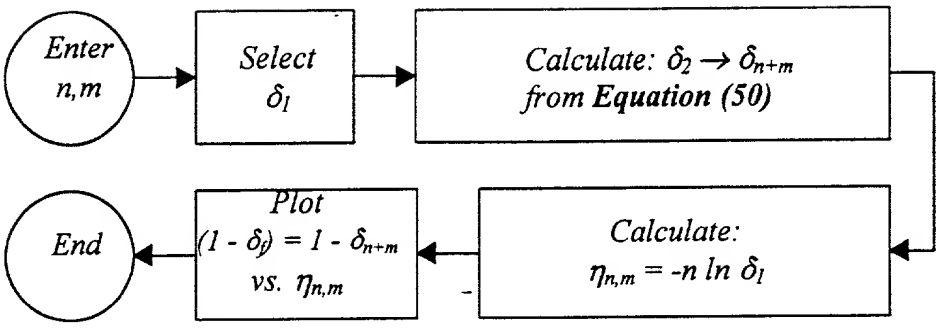

FIG. 19b

US 2005/0228630 A1

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FIG. 19c

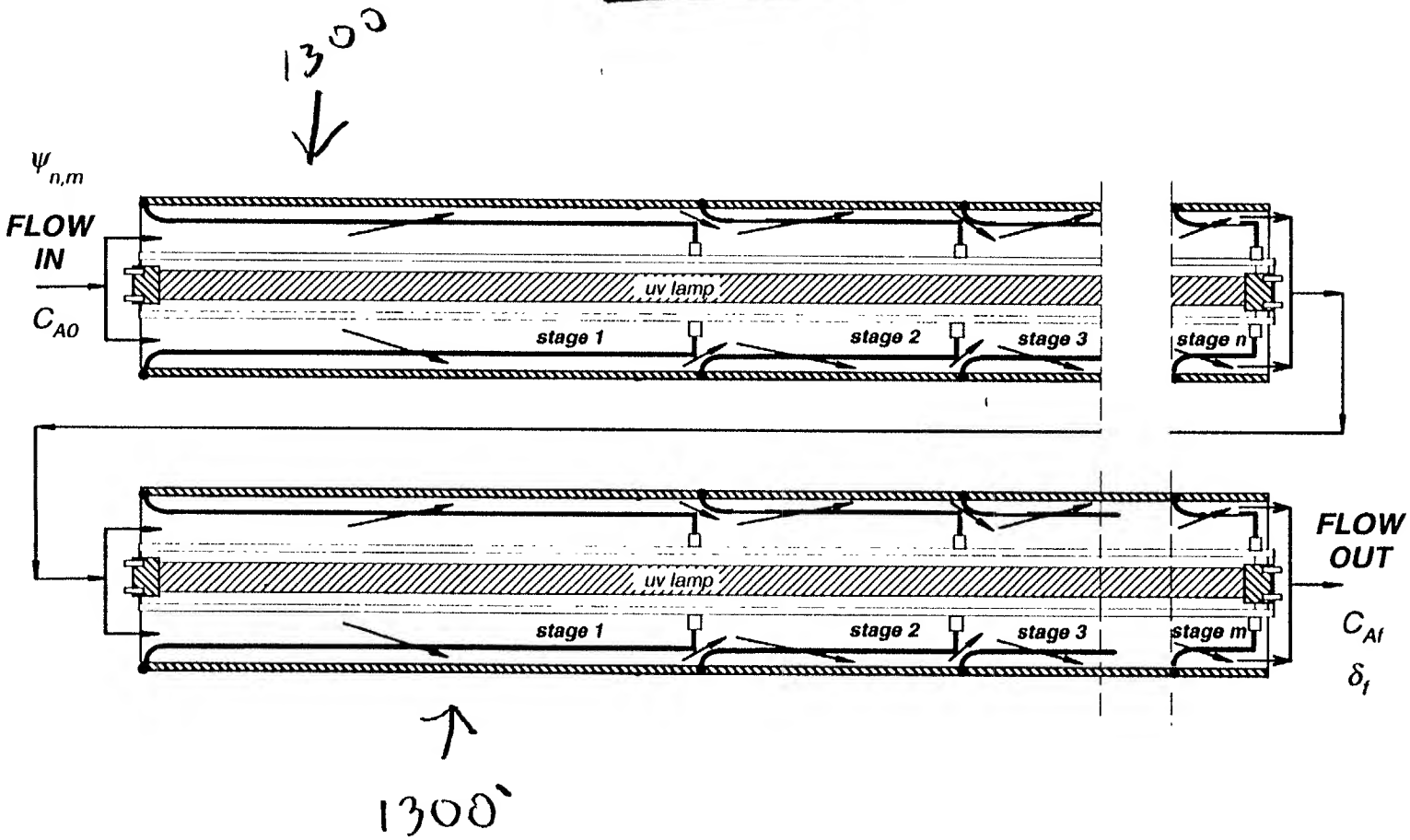
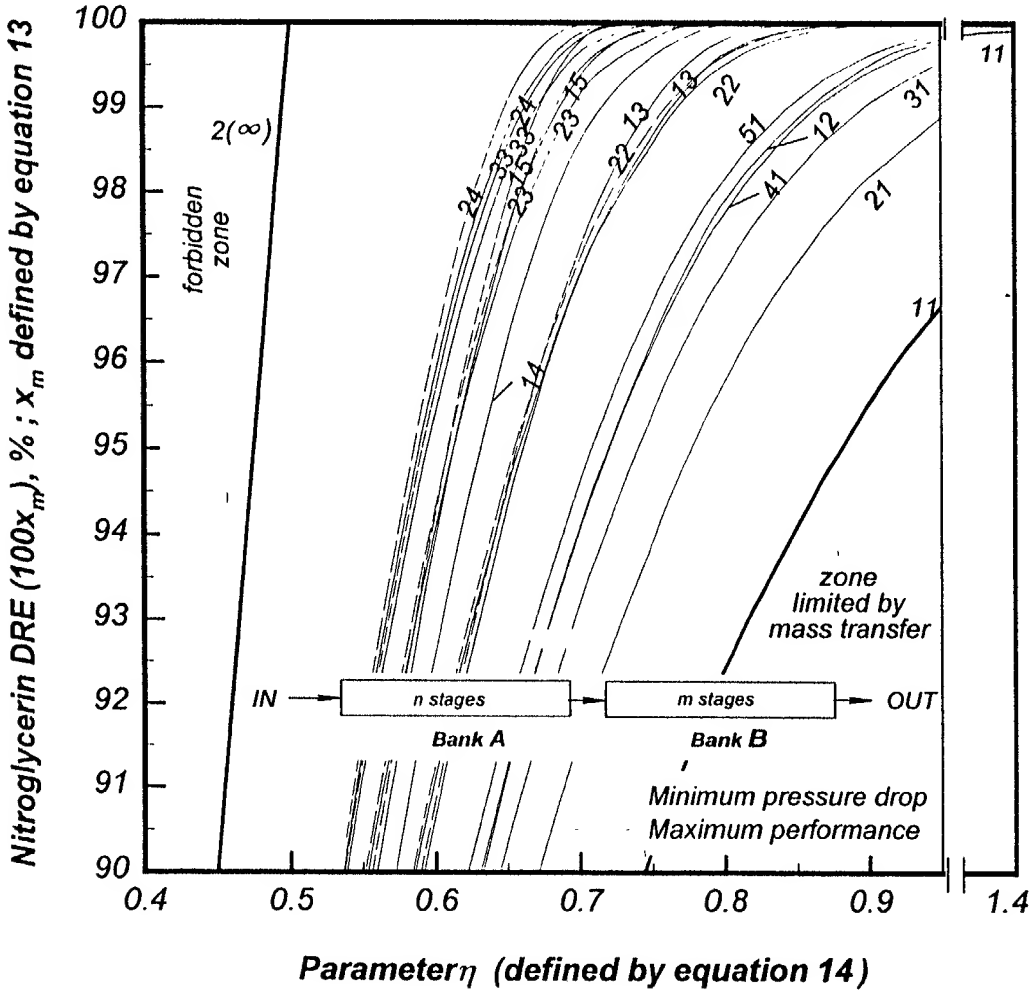


FIG. 20



09775136 .020101

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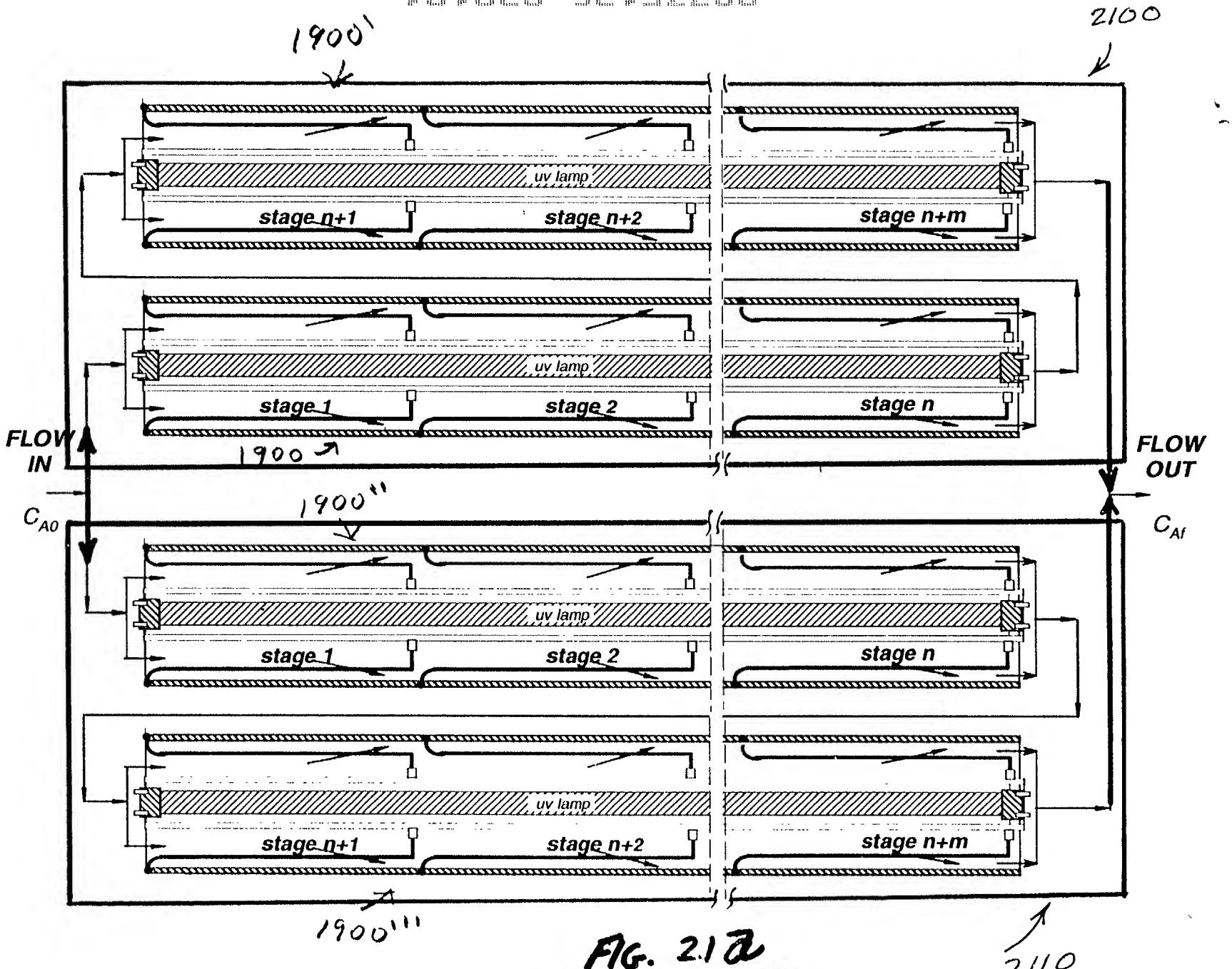

FIG. 21a

FOTO20 "9ETSZZ60

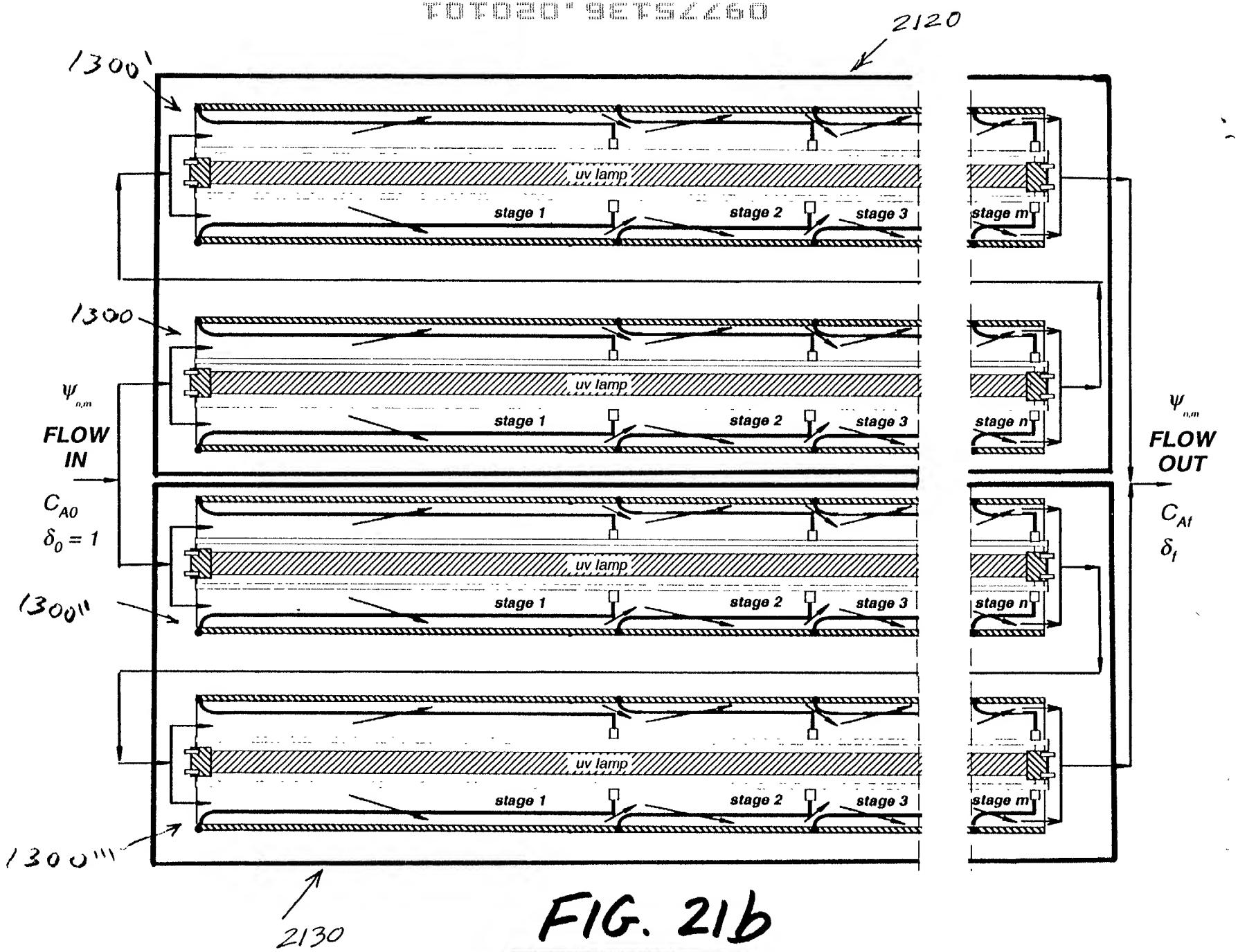

FIG. 21b

TOTO20"9ETSZZ60

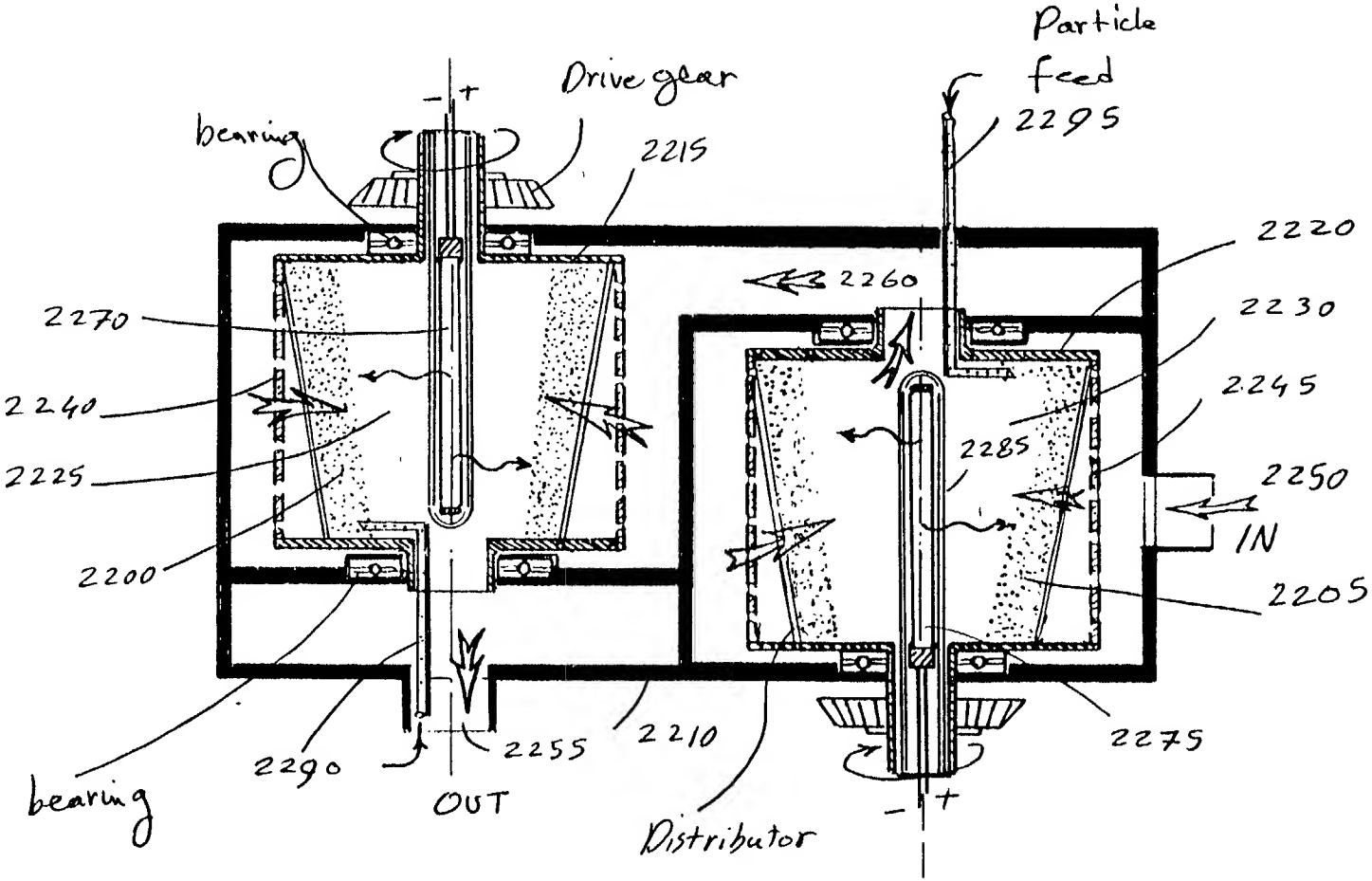

FIG. 22